REMARKS

This Amendment is filed in response to the Final Office Action dated May 16, 2005. All objections and rejections are respectfully traversed.

Claims 1 and 4-78 are in the case.

No claims were amended.

No claims were added.

Rejections Under 35 U.S.C. § 102(e)

At paragraphs 1-2 of the Office Action, claims 32-36, 38-44, and 46 were rejected under 35 U.S.C. § 102(e) as being unpatentable in view of Wesley et al., U.S. Patent No. 6,693,907 B1 issued on February 17, 2004 (hereinafter Wesley).

The present invention, as set forth in representative claim 32, comprises in part:

32.   *A router controlling congestion on links attached to the router, said router comprising:*
    a plurality of ports;
    a first port of said plurality of ports for receiving a data packet;
    a second port of said plurality of ports for transmitting said data packet;
    a receiver configured to receive an incoming loss report message on said second port;
    a processor configured to determine loss of packets on selected ports of said plurality of ports, said processor being further configured to calculate, in response to said incoming loss report message and said loss of packets, a loss rate statistic; and

a transmitter configured to transmit an outgoing loss report message through said first port, said outgoing loss report message containing a field having said loss rate statistic written therein.

As stated in the Amendment filed on November 18, 2004, Wesley discloses a multicast distribution tree of routers wherein some of the routers are designated as repair heads. Each repair head router keeps track of the number of packets received, and the number of the received packets that are retransmitted. Each router downstream from a repair head transmits to its repair head a loss rate metric for a multicast session, which is computed by dividing the count of the retransmitted multicast packets by the count of received multicast packets. The repair head routers, in turn, may transmit these loss rate metrics to the sending node, and the sending node may respond by reducing its transmission rate.

In further detail, Wesley uses header information read at a downstream node to measure, for a single multicast flow, his RX-RPC (count of retransmitted multicast packets) which he adds to his "number of missing packets," before dividing by the "number of packets in the measurement interval." (See formula at Wesley column 10, lines 10-14) Wesley then optionally transmits his "experienced loss" upstream as far as the sending node as a congestion or control packet.

Applicant claims a completely different method of determining congestion. First, Applicant uses a loss report received from a downstream node. Second, Applicant measures general packet loss at a port of a router, without referring to the multicast packets.

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Third, Applicant combines *said incoming loss report message* (block 456 of Figure 4C) *and said loss of packets* (block 458 of Figure 4C) to compute *a loss rate statistic*. Applicant then transmits the new loss rate statistic to the upstream router.

Wesley uses multicast packet header data read from multicast packets incoming from an upstream node to do his calculation. In sharp contrast, Applicant uses router data obtained at a port transmitting to a downstream node to do Applicant's calculations. Wesley is completely silent regarding Applicant's claimed novel *loss rate statistic*, calculated by the *processor* of a *router*, based on an *incoming loss report* and a *loss of packets* determined by the *processor*.

Accordingly, Applicant respectfully urges that Wesley is legally precluded from anticipating the claimed invention under 35 U.S.C. § 102 because Wesley does not disclose Applicant's claimed novel *router* comprising *a processor configured to determine loss of packets* and *calculate, in response to said incoming loss report message and said loss of packets, a loss rate statistic*.

Therefore, independent claims 32 and 33 are believed to be in condition for allowance.

Dependent claims 34-36, 38-44, and 46 are believed to be dependent from allowable independent claims, and likewise in condition for allowance.

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Rejections Under 35 U.S.C. § 103(a)

At paragraphs 3-4 of the Office Action, claims 1, 4-27, 30, 31, 35, 37, 47, 48-58,

60-72, and 74-78 were rejected under 35 U.S.C. § 103(a) as being unpatentable over

Wesley.

The present invention, as set forth in representative claim 1, comprises in part:

1.   *A router controlling congestion on links attached to the router,*
said router comprising:
        a plurality of ports;
        a first port of said plurality of ports for receiving a data packet;
        a second port of said plurality of ports for transmitting said data
packet;
        a receiver to receive an incoming loss report message on said
second port;
        a first processor to determine loss of packets on selected ports of
said plurality of ports;
        a second processor to calculate, in response to said incoming loss
report message and said loss of packets, a loss rate statistic; and
        a transmitter to transmit an outgoing loss report message
through said first port, said outgoing loss report message containing a
field having said loss rate statistic written therein.

As discussed above, Wesley discloses a multicast distribution tree wherein each

receiver downstream from a repair head transmits to its repair head a loss rate metric for a

multicast session. The loss rate metric is computed using multicast packet header data

read from multicast packets incoming from an upstream node.

Wesley is completely silent regarding Applicant's claimed novel *loss rate statistic*

calculated by a *processor* of a *router, in response to said incoming loss report message*

and said loss of packets determined by the *processor*. By Applicant's claimed novel invention not referring to "multicast packets", as does Wesley, Applicant bases his loss rate statistic on all packets lost at the port, not just the lost multicast packets. (Applicant's Specification, page 12, lines 22-27) Wesley only looks at lost multicast packets.

Furthermore, as discussed above, Applicant uses router data obtained at a downstream port to do Applicant's calculations, whereas Wesley uses multicast data read from incoming multicast packets to do his calculation. Wesley does not teach or suggest performing calculations based on outgoing, rather than incoming, data.

At paragraph 4 of the Office Action, the Examiner characterized the *first port* of the *router* as the downstream port and the *second port* as the upstream port. (Office Action dated 05/16/2005, page 7) However, Applicant recites *a first port… receiving a data packet* and *a second port… transmitting said data packet*. Data packets in a multicast distribution tree flow downstream from a sending node to receiver nodes. Thus, the *first port* of the *router* is the upstream port, and the *second port* is the downstream port. Accordingly, the Examiner's apparent confusion is thereby explained, and the Examiner's characterization is respectfully traversed.

Thus, for the reasons provided above, Applicant respectfully urges that Wesley is legally insufficient to render the presently claimed invention obvious under 35 U.S.C. § 103 because Wesley is completely silent regarding Applicant's claimed novel *loss rate statistic* calculated by a *processor* of a *router*, *in response to said incoming loss report message and said loss of packets* determined by the *processor*.

Accordingly, all independent claims are believed to be in condition for allowance.

All dependent claims are believed to be dependent from allowable independent claims, and therefore in condition for allowance.
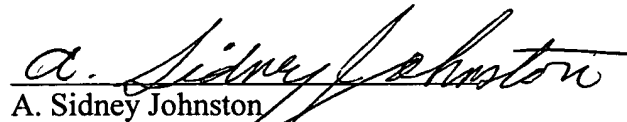
Favorable action is respectfully solicited.

Applicant respectfully requests that the Examiner give Applicant's undersigned attorney a telephone call concerning this application for U.S. Patent if any further questions remain.

Please charge any additional fee occasioned by this paper to our Deposit Account

No. 03-1237.

Respectfully submitted,

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